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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,175	04/02/2001	Kazuhiko Yanagawa	HITA.0045	7332

7590

08/05/2003

Stanley P. Fisher
Reed Smith Hazel & Thomas LLP
3110 Fairview Park Drive, Suite 1400
Falls Church, VA 22042-4503

EXAMINER

RUDE, TIMOTHY L

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 08/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/822,175

Applicant(s)

YANAGAWA ET AL.

Examiner

Timothy L Rude

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claims

1. Claims 1 and 2 are replaced by claims 35 and 36 respectively (rule 1.126).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 35 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Onishi et al (Onishi) USPAT 5,643,471.

As to claim 35, Onishi discloses in Figures 12A-12C a liquid crystal display device of Example 1 (col. 17, line 60 through col. 33, line 34; especially col. 31, line 1 through col. 33, line 34) comprising a pair of substrates, 1a and 1b, as disposed to spatially oppose each other with a layer of liquid crystal material interposed therebetween and a seal material, 4, used for adhesion of one of the substrates to a remaining substrate, said seal material also having a function of encapsulating the liquid crystal material, wherein

a plurality of photolithographically formed (col. 31, lines 25-32) projection bodies, 10b, are precisely dispersed on one of said substrates in a predetermined shape thereof

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at a desired location thereon, and then said seal material is formed on said one of said substrates to bury said projection bodies therewithin (as illustrated in Figure 12B) (see also masks illustrated in Figures 11 and 13).

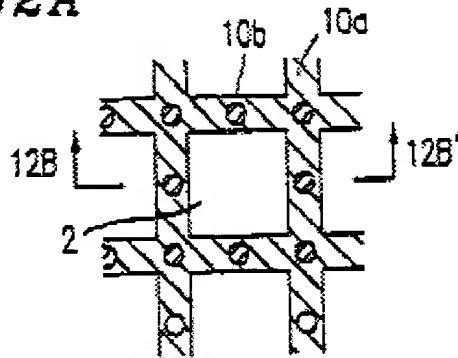
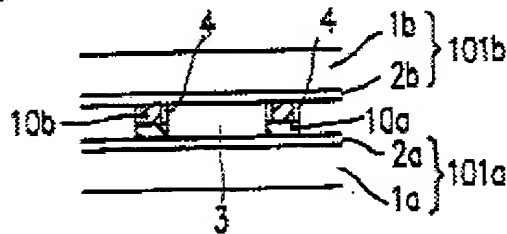
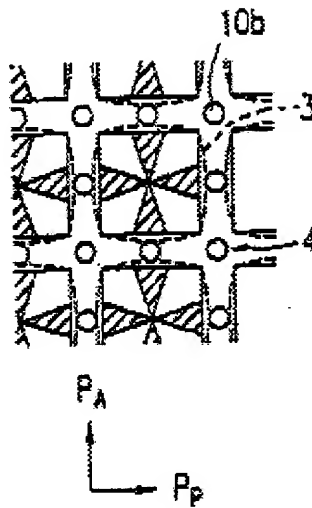
FIG. 12A**FIG. 12B**

FIG. 12C

As to claim 36, Onishi discloses in Figures 12A-12C a liquid crystal display device of Example 1 (col. through col. 33, line 34) the liquid crystal display device as recited in claim 36, wherein said plurality projection bodies are parallel-disposed (columns are parallel to each other and rows are parallel to each other, per Figure 12C).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

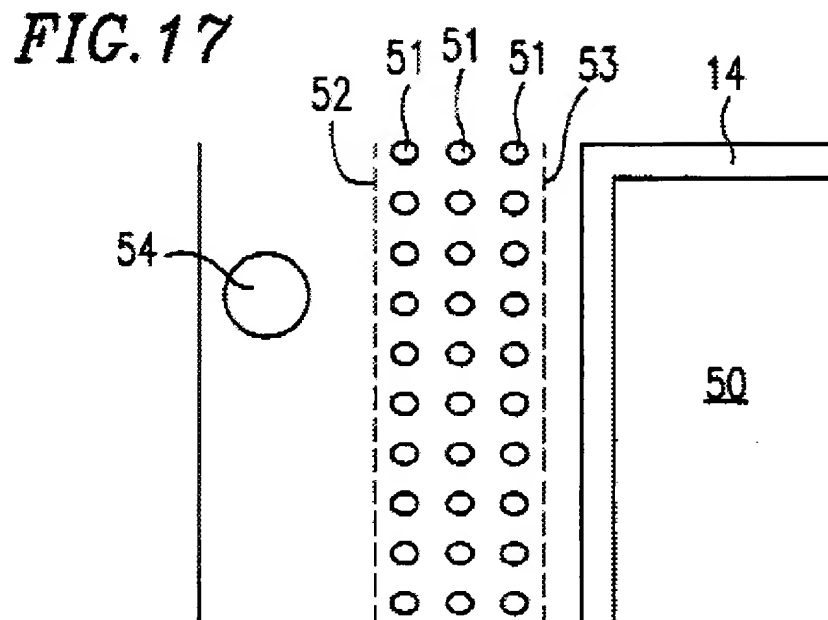
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Anticipated modifications (please see MPEP 706.07(a)) to claim 35 and/or 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onishi, as applied to claims 35 and 36 above, in view of Nakahara et al (Nakahara) USPAT 6,239,855 B1.

As to anticipated modified claims 35 and 36, Onishi discloses the liquid crystal display device above with photolithographically formed spacers buried in seal material about the entire perimeter of the display area (seal outboard outermost pixels).

Onishi does not explicitly disclose a device wherein a plurality of projection bodies are parallel-disposed in more than one row within a single bead of seal material disposed about the perimeter of the display area.

Nakahara teaches in Figure 17 a device comprising a plurality of parallel-disposed sealant particles, 51, (Applicant's projection bodies) about the perimeter of the display area to minimize stress distortion and waviness of the glass plates (col. 12, line 66 through col. 13, line 8).



Nakahara is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add a plurality of parallel-disposed sealant particles (Applicant's projection bodies) to minimize stress distortion and waviness of the glass plates

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of Onishi which has photolithographically formed projection bodies buried in seal material, with the plurality of parallel-disposed sealant particles (Applicant's projection bodies) about the perimeter of the display area of Nakahara to minimize stress distortion and waviness of the glass plates.

Response to Arguments

4. Applicant's arguments filed on 22 May 2003 with respect to claims 35 and 36 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

References cited but not applied are relevant to the instant Application.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L Rude whose telephone number is (703) 305-0418. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

Timothy L Rude
Examiner
Art Unit 2871

TLR
July 28, 2003


ROBERT H. KIM
SUPERVISOR, PATENT EXAMINER
TECHNOLOGY CENTER 2800